

IN THE CLAIMS

Claim 1 (Previously Presented). A process for preparing a polyacrylate having an at least bimodal molecular weight distribution, which comprises polymerizing a monomer mixture of

a1) 70% to 100% by weight acrylic acid and/or acrylic esters of the formula $\text{CH}_2=\text{C}(\text{R}')(\text{COOR}^2)$, where $\text{R}' = \text{H}$ or CH_3 and R^2 is an alkyl chain having 1 to 20 carbon atoms, and

a2) 0 to 30% by weight olefinically unsaturated monomers containing functional groups,

in an at least two-phase free-radical solvent polymerization in the presence of an organic solvent or in mixtures of organic solvents to give a polyacrylate having an at least bimodal molecular weight distribution,

the polymerization being carried out in a first phase of the at least two-phase polymerization, in the presence of a first initiator concentration, to give a first polymer having a first molecular weight and, before the monomer mixture has been completely consumed by the polymerization, a further phase or phases of polymerization is or are started, by the addition at least once of a regulator, and in this further phase or further phases a second polymer or polymers is or are synthesized, said second polymer having a second molecular weight which second molecular weight is lower than said first molecular weight.

Claim 2 (Previously Presented). The process of claim 1, wherein the at least two-phase free-radical polymerization is taken to a total conversion of all phases of greater than 97%.

Claim 3 (Previously Presented). The process of claim 1 wherein the polymerization is carried out in two phases and a bimodal molecular weight distribution is built up, the molecular weight maxima in the molecular weight distributions of the two

polymers being at least 50 000 g/mol apart.

Claim 4 (Previously Presented). The process of claim 1, wherein the polydispersity of the polymers is greater than 6.

Claim 5 (Previously Presented). The process of claim 1, wherein the molar ratio of initiator to monomer in the first phase is less than 0.005.

Claim 6 (Previously Presented). The process of claim 1, wherein the addition of initiator takes place in two or more steps.

Claim 7 (Previously Presented). The process of claim 1, wherein said at least one regulator is selected from the group consisting of alcohols, ethers, dithioethers, dithiocarbonates, trithiocarbonates, nitroxides, alkyl bromides, thiols, TEMPO and TEMPO derivatives.

Claim 8 (Previously Presented). The process of claim 1, wherein the regulator is added no earlier than after one hour's polymerization time but no later than two hours before the end of polymerization.

Claims 9-13 (**Cancelled**).